

## INTERNATIONAL SEARCH REPORT

International application No.  
PCT/CA2004/001524

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7: C07C 255/46; C07C 255/44; C07C 255/45; C07D 277/02; C07D 277/20; C07D 277/30; A61K 31/426;  
A61P 19/00; A61P 19/00; A61P 19/08; A61P 19/10

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)  
IPC 7: C07C; C07D; A61K; A61P

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base, and, where practicable, search terms used):  
Keywords: "cathepsin", "cysteine", "nitrile", "protease", "amide", "amido", Canadian Patent Database; PLUSPAT; STN-CAPLUS;  
ACS PUB, BIO MED CENTRAL; WEST; SCIRUS; DELPHION; EPO

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P, Y	BIOORGANIC & MED. CHEM. LETT. (ROBICHAUD, ET AL) Vol. 14, Issue 16, pages 4291-4295, 16 AUG. 2004 see whole document	1-13
X	CA 2439415 (PRASIT, ET AL) 12 September 2002	1
Y	Claim 1, Scheme 1c, pages 54-55	2-13
Y	WO 0055125 (BRYANT, ET AL) 21 September 2000 Example 4, compound 69, page 68	1-13
P, X	US 20030232863 (BAYLY, ET AL) 18 December 2003 see whole document	1-13

Further documents are listed in the continuation of Box C[X].

Patent family members are listed in annex[X].

\* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international-type search  
17 November 2004 (17-11-2004)Date of mailing of the international-type search report  
14 January 2005 (14-01-2005)Name and mailing address of the ISA/  
*Commissioner of Patents*  
*Canadian Patent Office - PCT*  
*Ottawa/Gatineau K1A 0C9*  
Facsimile No. 1-819-953-9358Authorized officer  
Okemona Oke (819) 956-4108

## INTERNATIONAL SEARCH REPORT

International application No.  
PCT/CA2004/001524

## C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	WO 0168645 (PALMER, ET AL) 20 September 2001 Examples 12, 13, 15	1-13
A	J. Med. Chem. (GREENSPAN, ET AL) Vol. 44, No. 26, pages 4524-4534, 2001 see whole document	1-13
A	J. Med. Chem. (WARD, ET AL) Vol. 45, No. 25, pages 5471-5482, 2002 see whole document, especially Tables 1-3	1-13

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.  
PCT/CA2004/001524

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
CA 2439415 A	12.09.2002	US20040198982 A1	07-10-2004
		WO02069901 A2	12-09-2002
		EP1372655 A2	02-01-2004
WO 00 55125 A	08-03-2000	WO0055126 A3	22-02-2001
		US20030119788 A1	26-06-2003
		US20030096796 A1	22-05-2003
		US20020086996 A1	04-07-2002
		US6593327 B1	15-07-2003
		US6476026 B1	05-11-2002
		US6455502 B1	24-09-2002
		TR0201874 T2	21-10-2002
		ZA0107495 A	11-09-2002
		SK0101288 A5	04-04-2002
		SI1178958 T1	31-08-2004
		PT1178958 T	30-07-2004
		PL0350456 A1	16-12-2002
		TR0201874 T2	21-10-2002
		N020014485 AO	14-09-2001
		JP2002539192 T2	19-11-2002
		IL0145430 AO	30-06-2002
		HU0200347 AB	29-06-2002
		HR20010737 A1	31-12-2002
		EP1178958 A2	13-02-2002
		EP1452522 A2	01-09-2004
		EP1161415 A2	12-12-2001
		EE0100485 A	17-02-2003
		DK1178958 T3	21-06-2004
		DE60008369 C0	25-03-2004
		CZ20013248 A3	17-04-2002
		CN1364155 T	14-08-2002
		CN1362947 T	07-08-2002
		CA2368148 AA	21-09-2000
		CA2368122 AA	21-09-2000
		BR0009043 A	08-01-2002
		BG0106013 A	31-05-2002
		BG0106003 A	28-06-2002
		AU0774827 B2	08-07-2004
		AU0769736 B2	05-02-2004
		AU0037486 A5	04-10-2000
		AU0037461 A5	04-10-2000
		AT0259782 E	15-03-2004
WO 01 68645 A	20-09-2001	WO0168645 A3	07-03-2003
		AU 0145764 A5	24-09-2001
US 20030232863 A	18-12-2003	WO03075836 A3	15-07-2004
		WO03075836 A2	18-12-2003

Best Available Copy

## INTERNATIONAL SEARCH REPORT

International application No.  
PCT/CA2004/001524**Box No. II** Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons :

1. ☐ Claims Nos. :  
because they relate to subject matter not required to be searched by this Authority; namely:
2. ☒ Claims Nos.: 1 ( **searched incompletely** )  
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically :  
The large number of theoretically conceivable compounds that can result from the combination and permutation of all the claimed substituents in claim 1 precludes a complete and comprehensive search. Claim 1 so lack support and the application so lack enabling disclosure that the scope of subject matter for which protection is sought cannot be delineated with certainty. The search has therefore been carried out for compounds which appear to be fully supported and disclosed, namely, compounds that are structurally similar to the examples, especially compounds according to the formula in claims 1-13 having the following attributes: R<sup>1</sup> and R<sup>2</sup> together form cycloalkyl; R<sup>3</sup> and R<sup>4</sup> are each alkyl optionally substituted by halo atoms; E and D are each phenyl, wherein together, they form biphenyl; and G is alkyl, cycloalkyl or alkylcycloalkyl.
3. ☐ Claims Nos. :  
because they are dependant claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

**Box III** Observation where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows :

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos. :
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos. :

Remark on Protest ☐ The additional search fees were accompanied by the applicant's protest.  
☐ No protest accompanied the payment of additional search fees.